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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,073	08/29/2000	Edward A. Jakush	97-676.5	9189

7590 08/09/2005
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EXAMINER

TOOMER, CEPHIA D

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/650,073

Applicant(s)

JAKUSH ET AL.

Examiner

Cephia D. Toomer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2005 has been entered.
2. This Office action is in response to the amendment filed May 27, 2005 in which claims 1, 17-20, 37 and 38 were amended.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 12, 16 and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the specification for a surfactant that is an aliphatic hydrocarbon.

Originally, Claims 12 and 16 were claiming ICI HYPERMER E464. The additive is defined in US Patent 5,349,030 as a copolymer of a long-chain alkylene hydrophobe and various anionic/nonionic hydrophiles and has a molecular weight of about 2300. Applicant is now claiming aliphatic hydrocarbon nonionic surfactant. This description of ICI HYPERMER E464 is clearly broader than what Applicant has a right to claim.

Originally Claim 35 contained both ICI HYPERMER E464 and ICI HYPERMER A-60. US Patent 5,151,456 defines A60 as a modified polyester nonionic surfactant. Applicant's description is clearly broader than the description given by those skilled in the art. Also in claim 35, Applicant is claiming "xylene modified polyester surfactant." The examiner does not find this limitation in the specification.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 19 and 38 contain the trademark/trade name DIACID 1550. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is

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used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a coupling agent and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-11, 13-15, 17-34, 36-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin (US 5,284,492).

Dubin teaches a fuel oil emulsion (o/w or w/o) comprising a fuel oil (diesel), 5-50% demineralized water and an emulsification system. The droplet size is below 5 microns. The emulsification system is present in the emulsion in an amount from 0.05 to 5.0 % by weight. The emulsification system comprises an alkanolamide (oleic diethanolamide), a phenolic surfactant (polymeric dispersant) and a block polymer (see abstract; col. 3, lines 41-44, 58-66; col. 4, lines 1-15, 23-44; col. 5, lines 7-59 and claims 5-12). The emulsification system may also contain stabilizers (see col. 6, lines 54-64). Dubin teaches the limitations of the claims other than the differences that are discussed below.

Dubin differs from the claims in that he does not specifically teach the proportions of the individual surfactants. However, he does teach that the emulsification system is contained in the emulsion in an amount from 0.05 to 5.0 % by weight and he teaches the proportions of the surfactants contained in the system. Therefore, it would have been obvious to one of ordinary skill in the art to have optimized the proportions through routine experimentation to obtain the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

9. Claims 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin (5,284,492 further in view of Genova (US 5,259,851).

Dubin fails to teach that the composition of his invention contains an anti-freeze agent and a cetane improver. However, no unobviousness is seen in this difference because Genova teaches that fuel compositions, such as those taught by Dubin, may contain these conventional additives (see abstract; col. 3, lines 40-47).

It would have been obvious to one of ordinary skill in the art to have included anti-freeze agents and cetane improvers in the composition of Dubin because Genova teaches that these are conventional diesel fuel additives and that they would perform their attendant functions.

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10. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of Wenzel (Us 4,002,435).

The prior art teaches that it is conventional for fuel compositions to contain anti-freeze agents. However, the prior art fails to teach which specific compounds are used for this purpose. Wenzel teaches that methanol and ethanol are used in emulsion fuels to provide antifreeze characteristics to the fuel (see col. 4, lines 42-53). It would have been obvious to one of ordinary skill in the art to have included methanol as an antifreeze agent in the composition of Dubin because Wenzel teaches that the alcohol would allow the fuel to be stable below the freezing point of the water that is contained in the emulsion.

11. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of Schwab (US 5,669,938).

Dubin and Genova fail to teach the specific cetane improvers; however, Schwab teaches this difference. Schwab teaches that w/o emulsions of diesel fuel contains 2-ethylhexyl nitrate and hydrocarbyl peroxides as ignition improvers (see abstract and col. 1, lines 5-30).

It would have been obvious to one of ordinary skill in the art to have included the ignition improvers of Schwab in the composition of Dubin because Schwab teaches that emulsion fuels suffer from a substantial reduction in cetane number and that the nitrates and peroxides help to overcome this problem.

12. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of European Patent Application 475 620 ("EPA").

Dubin and Genova fail to teach the specifics of the cetane improver; however, EPA teaches this limitation. EPA teaches that oxidizing agents, such as ammonium nitrate improve the cetane number of emulsion fuels (see page 2, lines 19-42).

It would have been obvious to one of ordinary skill in the art to have included the ignition improver of EPA in composition of Dubin because EPA teaches that emulsion fuels suffer from a substantial reduction in cetane number and that the oxidizing agents (ammonium nitrate) help to overcome this problem.

13. Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that Dubin fails to teach a fuel emulsion for an internal combustion engine (IC) and that it is clear that IC and turbines are not the same and that they require fuels with different stabilities.

If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 51 USPQ 2d 1161 (Fed. Cir. 1999). Dubin clearly renders obvious the claimed composition.

Applicant argues that Genova, Wenzel, Schwab and EP 475620 teach transparent or clear emulsions. Applicant argues that the average droplet size is less than 0.1 micron.

These references were not cited for their average droplet size but for the various additives that are required in the present claims. Furthermore, all of the references

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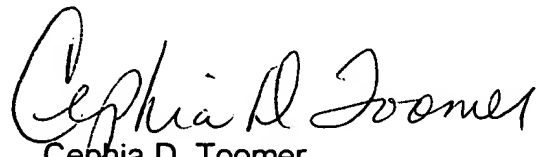
teach that their fuels are stable. Therefore, for one to optimize the average droplet particle size in order to form a stable emulsion is obvious. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the droplet size through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cephia D. Toomer
Primary Examiner
Art Unit 1714

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